

CLAIMS

1. A see-through medaka wherein said medaka is deficient in iridophores, melanophores, xanthophores and leucophores.
2. The see-through medaka according to claim 1 wherein said medaka is produced by means of repeated selective mating between iridophore deficient mutant medaka strain gu, albino mutant medaka strain i-3 and leucophore deficient mutant medaka strain lf.
3. A see-through medaka wherein said medaka is produced by means of further selective mating between the see-through medaka according to claim 2 and iridophore deficient mutant medaka strain il-1.
4. A see-through medaka wherein said medaka is deficient in iridophores, melanophores and xanthophores, and wherein the sex of said medaka can be identified by the presence or absence of leucophores and/or a DNA marker.
5. The see-through medaka according to claim 4 wherein said medaka is produced by means of repeated selective mating between iridophore deficient mutant medaka strain gu, albino mutant medaka strain i-3, leucophore deficient mutant medaka strain lf and medaka FLF strain which is deficient in leucophores in the female.
6. A see-through medaka wherein said medaka is produced by means of further selective mating between the see-through medaka according to claim 3 and the see-through medaka according to claim 5.
7. The see-through medaka according to claim 1 wherein a specific organ is allowed to produce luminescence by introducing a hybrid gene being a fusion of a promoter of a gene which expresses specifically in said organ, with a coding region of a gene encoding a fluorescent protein.

8. The see-through medaka according to claim 3 wherein a specific organ is allowed to produce luminescence by introducing a hybrid gene being a fusion of a promoter of a gene which expresses specifically in said organ, with a coding region of a gene encoding a fluorescent protein.

9. The see-through medaka according to claim 4 wherein a specific organ is allowed to produce luminescence by introducing a hybrid gene being a fusion of a promoter of a gene which expresses specifically in said organ, with a coding region of a gene encoding a fluorescent protein.

10. The see-through medaka according to claim 6 wherein a specific organ is allowed to produce luminescence by introducing a hybrid gene being a fusion of a promoter of a gene which expresses specifically in said organ, with a coding region of a gene encoding a fluorescent protein.

11. The see-through medaka according to claim 7 wherein said gene encoding the fluorescent protein is a gene encoding a green fluorescent protein.

12. The see-through medaka according to claim 8 wherein said gene encoding the fluorescent protein is a gene encoding a green fluorescent protein.

13. The see-through medaka according to claim 9 wherein said gene encoding the fluorescent protein is a gene encoding a green fluorescent protein.

14. The see-through medaka according to claim 10 wherein said gene encoding the fluorescent protein is a gene encoding a green fluorescent protein.

15. The see-through medaka according to claim 7 wherein said organ is a gonadal organ.

16. The see-through medaka according to claim 8 wherein said organ is a gonadal organ.
17. The see-through medaka according to claim 9 wherein said organ is a gonadal organ.
18. The see-through medaka according to claim 10 wherein said organ is a gonadal organ.
19. The see-through medaka according to claim 11 wherein said organ is a gonadal organ.
20. The see-through medaka according to claim 12 wherein said organ is a gonadal organ.
21. The see-through medaka according to claim 13 wherein said organ is a gonadal organ.
22. The see-through medaka according to claim 14 wherein said organ is a gonadal organ.